

CAI  
HW  
-2123



3 1761 11556578 0



**SHARP  
EYES  
FOR  
TEENAGERS**

BLINDNESS CONTROL SECTION  
DEPARTMENT OF NATIONAL HEALTH AND WELFARE  
OTTAWA

# **SHARP EYES FOR TEENAGERS**

Good eyesight is normally taken for granted by teenagers, even though some of them may need glasses to sharpen their vision. Many do not realize that there is a limit to what their eyes can do and much eye strain develops because of incorrect visual habits.

Human eyes were evolved to give good daylight vision and our early ancestors used their eyes mainly in the search for food and the avoidance of their enemies. To-day scientific and social developments create complex eye tasks which have to be carried on far into the night as well as by day. But our eyes have not yet had time to adapt themselves fully to these new demands.

## **CAUSES OF EYE STRAIN**

The commonest cause of eye strain, even in normal eyes, is prolonged reading or close eye work under poor lighting conditions. The resultant eye strain is due not to fatigue of the nerve elements of the eyes but to over-work and tiring of the eye muscles.

The eye muscles have many functions. The muscles of the pupil, for instance, adjust the amount of light which enters the eyes. Another muscle regulates the

focus of the lens for near or far vision and the external muscles coordinate the two eyes to produce single vision from both eyes (binocular vision).



If the eye muscles are overworked because of constant use in poor light, it is not surprising that symptoms of eye strain appear. If, when in otherwise good health, headaches, sore eyes, inability to concentrate or temporary dimness of vision develop, you may be suffering from eye strain. These symptoms may only appear when you are reading or studying in poor light.

Reading in bed or while lying down is not recommended. The head and eyes are not in the best position for efficient reading and too often the available light is poor. These habits lead to unnecessary eye strain.

# WHAT TO DO ABOUT IT

Eye strain is usually remedied by reading and working in comfortable non-glare light. If after securing good light the symptoms persist, visit an eye specialist to see if other causes of strain exist. These may arise from slight defects or from partial failure in the delicate adjustments of eye muscle balance. The commonest cause of defective vision is an error of refraction (long sight, short sight or astigmatism). In such cases the defect may be corrected with proper eye glasses.

Cross eyes usually appear before school age and are usually associated with defective vision in one or both eyes. Such a condition is best treated as early as possible after it is noticed since the vision in the turning eye may become defective through disuse.





# HOW MUCH LIGHT IS NEEDED?

Since eye strain is commonly caused by poor lighting, it is best to know the amount of light necessary for close eye work and how to obtain it. A minimum of 25 to 50 foot-candles\* of non-glare light on your work is suggested for prolonged comfortable reading or for fine eye tasks. During the day, this should be no problem, since the illumination near a good window will vary from 100 to 200 foot-candles, depending on the brightness of the day and the size and exposure of the window. However, at some distance from the window, the daylight may need to be supplemented by artificial light.



For home reading or studying, especially at night, do not depend upon ceiling lights alone for illumination.



\* A foot-candle is the light emitted from a standard wax candle at a distance of one foot.

A table or reading lamp fitted with one 100 watt or two 60 watt *frosted* bulbs four feet from the working surface, and a transparent shade will approximate the 50 foot-candles suggested above. The ceiling lights should be turned on in the room to prevent sharp contrasts. With sufficient non-glare light (in addition to proper eye glasses when necessary) it is possible to study for hours without eye strain.

Where there is no electricity, sufficient light can be obtained from any modern type of gasoline or coal oil shaded lamps.

The work should be at least fifteen to twenty inches from the eyes. Holding work closer indicates either a poor visual habit or a need for glasses. A visit to the eye specialist may solve this problem.

## TELEVISION

"What effect does television have on the eyes?" Many people ask. Television is a somewhat mixed blessing, for, while it provides entertainment and education, it can also cut into time which might better be spent in useful work, recreation, or refreshing sleep. It will not normally injure the eyes, but it often causes eye strain if you sit too close to the screen or view it for too long a time — especially if the picture is not clear or is "jumpy".

Try experimenting with the television set to find the best distance for comfortable viewing. At any rate, avoid sitting closer than six to eight feet from a seventeen inch screen, and still further away from a larger



screen. Annoying contrasts of light and dark can be avoided by providing some other source of light in the room in addition to that supplied by the television screen.

## IN SUMMARY

Do not make your reading or studying more difficult by straining your eyes in poor light. If you have to use eye glasses, wear them as advised by your eye specialist. Remember that glasses not only serve a useful purpose but they can actually improve the appearance. Demand shatterproof lenses. Then you can safely engage in sports that might otherwise be barred because of poor sight or the danger to the eyes of possible broken lenses.

You learn more through your eyes than in any other way. Be sure that you do not abuse them.





**Produced For**  
**Blindness Control Section**  
**By Information Services Division**  
**Department of National Health and Welfare**  
**By Authority of the Minister, Honorable J. Waldo Monteith**  
**1963**

**Roger Duhamel, F.R.S.C.**  
**Queen's Printer and Controller of Stationery**  
**Ottawa, 1963**

**Cat. No. H52-663**